CLAIMS

1. Inverse emulsion wherein the weight ratio between the aqueous phase and the oil phase is from 4:1 to 2:1 and containing from 20 to 70% by weight of an anionic acrylic polymer obtained by inverse emulsion polymerisation of one or more anionic acrylic monomers, at least one of which containing a strongly acidic functional group, dissolved in the aqueous phase, and at least a hydrophobic acrylic monomer dissolved in the oil phase before the mixing of the two phases, the percentage of the hydrophobic acrylic monomers on the total weight of the anionic acrylic monomers being from 0.1% to 5% by weight.
2. Inverse emulsion according to claim 1., wherein the percentage of the hydrophobic acrylic monomers on the total weight of the anionic acrylic monomers is from 0.5 to 1.5% by weight.
3. Inverse emulsion according to claim 1. or 2., wherein the anionic acrylic monomer is 2-acrylamido-2-methylpropanesulfonic acid and/or its sodium salt.
4. Inverse emulsion according to claim 3., wherein the hydrophobic acrylic monomer are esters of acrylic or methacrylic acid with C_4-C_{20} linear or branched monofunctional alcohols.
5. Inverse emulsion according to claim 4., wherein the hydrophobic acrylic monomer is stearyl methacrylate or n-butyl methacrylate.
6. Procedure for the preparation of an inverse emulsion characterised by:
   a. adding to a mixture of water and one or more anionic acrylic monomer, at least one of which containing a strongly acidic functional group, an aqueous solution of an alkali to regulate the pH between 4 and 10, a cross-linking agent and an initiator of radical polymerisation, maintaining the temperature between 0° and 5°C;
   b. preparing an oil phase containing from 0.1 to 10% by weight of at least one hydrophobic acrylic monomer and one or more water-in-oil emulsifiers;
   c. introducing the mixture obtained in a. into the oil phase prepared in b. and emulsifying the two phases by vigorous stirring;
   d. initiating the polymerisation and completing it maintaining the temperature between 55° and 95°C under vigorous stirring;
   e. cooling the reaction mixture to 35-45°C and adding an oil-in-water emulsifier.

7. Procedure for the preparation of an inverse emulsion according to claim 6., wherein the anionic acrylic monomer containing a strongly acidic functional group is 2-acrylamido-2-methylpropanesulfonic acid and/or its sodium salt.
8. Procedure for the preparation of an inverse emulsion according to claim 7., wherein the hydrophobic acrylic monomers are esters of acrylic or methacrylic acid with C_4-C_{20} linear or branched monofunctional alcohols.
9. Procedure for the preparation of an inverse emulsion according to claim 8., wherein the hydrophobic acrylic monomers are stearyl methacrylate or n-butyl acrylate.
10. Procedure for the preparation of an inverse emulsion according to claim 9., wherein the anionic acrylic monomers dissolved in the aqueous phase are a mixture of at least one monomer containing a strongly acidic functional group (AF) and one or more monomers containing a carboxylic group (AC), the weight ratio between AF and AC being comprised from 4:1 and 1:1.
11. Procedure for the preparation of an inverse emulsion according to claim 10., wherein the anionic acrylic monomers containing a carboxylic group are chosen among acrylic acid and methacrylic acid.
12. Procedure for the preparation of an inverse emulsion according to any of the claims from 6. to 11., wherein the anionic acrylic polymer obtained by inverse emulsion polymerisation is cross-linked with from 0.01% to 1 % by weight on the total weight of the monomers of a compound containing two or more ethylenic groups.
13. Procedure for the preparation of an inverse emulsion according to claim 12., wherein the compound containing two or more ethylenic groups is methylene-bis-acrylamide.